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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/584,650 | 05/09/2007 | Marc Louchkoff | PF040013 | 8145 |

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EXAMINER

SAFAPOUR, BOBBAK

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

04/26/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/584,650

Applicant(s)

LOUCHKOFF, MARC

Examiner

BOBBAK SAFAIPOUR

Art Unit

2618

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Interval Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 6/26/06

DETAILED ACTION

Claims 1-10 have been cancelled.

Claims 11-21 are pending in the present application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement submitted on 06/26/2006 has been considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant's Admitted Prior Art (hereinafter AAPA)** in view of **Mocquard et al. (US 2003/0232604 A1; hereinafter Mocquard)**.

Consider **claim 11**, AAPA discloses an outside unit for receiving waves originating from a satellite (pg 1, line 8; outside units for satellite reception), the unit comprising means of (pg 1, lines 8-9; read as LNBS- Low Noise Blocks) amplification and means of (pg 1, lines 8-9; read as LNBS- Low Noise Blocks) transposition using two transposition frequencies to transpose a satellite reception band to an intermediate frequency band of smaller size than the size of the reception band (pg 1, lines 24-27; According to the state of the art, the separation of the satellite band into two subbands is done by using a transposition signal which can take two frequency values which are conventionally 9.75 GHz and 10.6 GHz.), and in that the two transposition frequencies are chosen so that there exists an intersection common to the two parts of the band of the satellite reception band which is transposed to the intermediate band with the aid of each of the two oscillators with a spectrum inverted on itself (pg 1, lines 27-30; With these two transposition frequencies, the part of the satellite band lying between 10.7 and 11.7 GHz gets transposed between 950 and 1950 MHz and the frequency band lying between 11.7 and 12.75 GHz gets transposed between 1100 and 2150 MHz.).

AAPA fails to specifically disclose two transposition frequencies are such that a part of the satellite reception band is transposed to the intermediate frequency band in an infradyne manner by using one of the transposition frequencies and another part of the satellite reception band is transposed to the intermediate frequency band in a supradyne manner by using the other of the transposition frequencies.

In related art, Mocquard discloses two transposition frequencies are such that a part of the satellite reception band is transposed to the intermediate frequency band in an infradyne manner by using one of the transposition frequencies and another part of the satellite reception band is transposed to the intermediate frequency band in a supradynic manner by using the other of the transposition frequencies. (paragraphs 42-47; Transpositions are carried out in an infradyne and in a supradynic manner. When a transposition is performed in an infradyne manner, this signifies that the frequency of the local oscillator is less than the useful signal resulting from the transposition. When a transposition is performed in a supradynic manner, this signifies that the frequency of the local oscillator is greater than the useful signal resulting from the transposition.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the infradyne and supradynic manners of Mocquard into the outside unit of AAPA to compensate for the errors in the transposition frequencies.

Consider **claim 17**, AAPA discloses a method of receiving a radio signal originating from a satellite in a satellite reception band with the aid of an outside unit (pg 1, line 8; outside units for satellite reception) having means of (pg 1, lines 8-9; read as LNBS- Low Noise Blocks) amplification and means of (pg 1, lines 8-9; read as LNBS- Low Noise Blocks) transposition using two transposition frequencies to transpose a satellite reception band to an intermediate frequency band of smaller size than the size of the intermediate band (pg 1, lines 24-27; According to the state of the art, the separation of the satellite band into two subbands is done by using a transposition signal which can take two frequency values which are conventionally 9.75 GHz and 10.6 GHz.), wherein the reception band is separated, for a given polarization, into at

least four subbands of increasing frequencies (pg 1, lines 19-20; The intermediate band used lies between 950 and 2150 MHz. The outside units divide the reception band into four subbands each corresponding to half the satellite band for each of the polarizations.) and two adjacent subbands are transposed with the aid of two different transposition frequencies (pg 1, lines 27-30; With these two transposition frequencies, the part of the satellite band lying between 10.7 and 11.7 GHz gets transposed between 950 and 1950 MHz and the frequency band lying between 11.7 and 12.75 GHz gets transposed between 1100 and 2150 MHz.).

AAPA fails to specifically disclose two transposition frequencies are such that a part of the satellite reception band is transposed to the intermediate frequency band in an infradyne manner by using one of the transposition frequencies and another part of the satellite reception band is transposed to the intermediate frequency band in a supradyne manner by using the other of the transposition frequencies.

In related art, Mocquard discloses two transposition frequencies are such that a part of the satellite reception band is transposed to the intermediate frequency band in an infradyne manner by using one of the transposition frequencies and another part of the satellite reception band is transposed to the intermediate frequency band in a supradyne manner by using the other of the transposition frequencies. (paragraphs 42-47; Transpositions are carried out in an infradyne and in a supradyne manner. When a transposition is performed in an infradyne manner, this signifies that the frequency of the local oscillator is less than the useful signal resulting from the transposition. When a transposition is performed in a supradyne manner, this signifies that the frequency of the local oscillator is greater than the useful signal resulting from the transposition.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the infradyne and supradynic manners of Mocquard into the outside unit of AAPA to compensate for the errors in the transposition frequencies.

Consider **claims 12 and 18, and as applied to claims 11 and 17 above, respectively**, AAPA, as modified by Mocquard, discloses the claimed invention wherein one of the transposition frequencies is situated at a frequency below the bottom frequency of the satellite reception band from which is subtracted the bottom frequency of the intermediate band and in that the other of the frequencies is situated at a frequency above the upper frequency of the satellite reception band to which is added the base frequency of the intermediate band. (AAPA: pg 1, lines 27-30; With these two transposition frequencies, the part of the satellite band lying between 10.7 and 11.7 GHz gets transposed between 950 and 1950 MHz and the frequency band lying between 11.7 and 12.75 GHz gets transposed between 1100 and 2150 MHz.)

Consider **claims 13 and 19, and as applied to claims 12 and 18 above, respectively**, AAPA, as modified by Mocquard, discloses the claimed invention except for wherein one of the transposition frequencies is equal to 9.75 GHz and the other of the frequencies is equal to 13.7 GHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the transposition frequency equal to 9.75 GHz and 13.7 GHz since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Consider **claims 14 and 20**, and **as applied to claims 12 and 18 above, respectively**, AAPA, as modified by Mocquard, discloses the claimed invention except for wherein the maximum spacing between the oscillation frequencies is fixed by the width of the reception band to which is added twice the bottom frequency of the intermediate band and to which is also added 81 MHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the maximum spacing between the oscillation frequencies is fixed by the width of the reception band to which is added twice the bottom frequency of the intermediate band and to which is also added 81 MH, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claims 15 and 21**, and **as applied to claims 14 and 20 above, respectively**, AAPA, as modified by Mocquard, discloses the claimed invention except for wherein one of the transposition frequencies is equal to 9.72 GHz and the other of the frequencies is equal to 13.73 GHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the transposition frequency equal to 9.72 GHz and 13.73 GHz since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Consider **claim 16**, and **as applied to claim 11 above**, AAPA, as modified by Mocquard, discloses the claimed invention wherein the means of transposition comprises two oscillators

which are alternatively supplied so as to have a transposition signal of fixed frequency chosen from among the two transposition frequencies. (paragraphs 42-47; When a transposition is performed in an infradyne manner, this signifies that the frequency of the local oscillator is less than the useful signal resulting from the transposition. When a transposition is performed in a supradynic manner, this signifies that the frequency of the local oscillator is greater than the useful signal resulting from the transposition.)

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipoor whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Bobbak Safaipoor
B.S./bs

/Yuwen Pan/
Primary Examiner, Art Unit 2618

April 22, 2010